



technologies



Special Issue Reprint

Advanced Processing Technologies of Innovative Materials

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Today, newly developed materials synthesized by the most advanced technologies require additional deep research into their exploitation properties across various applications. The latest progressive technology approaches must be adapted to industrial realities in order to transition to the sixth technological paradigm. The fundamental issues of synthesizing and processing multicomponent objects, structures, and composites; the creation of new classes of materials and nanocrystalline alloys; advanced technologies of surface treatment and multilayer coatings; and the question of developing new approaches to searching for technology solutions using the last achievements in the information sphere of competencies remain especially in demand.

This Special Issue is devoted to the latest achievements in the fields of technologies of production and the synthesis of innovative 0D-2D, nano-, and functionally graded objects; nanocomposites, nanoporous structures (aerogels), and coatings; new processing methods and technologies based on plasma and laser treatment and electrophysical and chemical processing and synthesis, and methods for research into their exploitation properties; the development of digital models and machine learning approaches for the needs of industry.



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